

IN THE  
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Zhang-Lin Zhou, et al.

Confirmation No.:

Application No.:

Examiner:

Filing Date: Filed Herein

Group Art Unit:

Title: Digital Dyes Based on Electrochemical Redox Reactions

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- (X) under 37 CFR 1.97(b), or  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first office action on the merits; whichever occurs last)
- ( ) under 37 CFR 1.97(c) together with either a:  
( ) Statement under 37 CFR 1.97(e), or  
( ) a \$180.00 fee under 37 CFR 1.17(p), or  
(After the CFR 1.97 (b) time period, but before final action or notice of allowance, whichever occurs first)
- ( ) under 37 CFR 1.97 (d) together with a:  
( ) Statement under 37 CFR 1.97(e)(1) or (2), and  
( ) a \$180.00 fee set forth in 37 CFR 1.17(p).  
(Filed after final action, a notice of allowance, on or before payment of the issue fee)

Please charge to Deposit Account **08-2025** the sum of \$0.00. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **08-2025** pursuant to 37 CFR 1.25.

(X) Applicant(s) submit herewith Form PTO 1449 - Information Disclosure Statement together with any required copies of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56.

( ) A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56 (c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

It is requested that the information disclosed herein be made of record in this application.

"Express Mail" label no. **EL 968391525**

Date of Deposit **10/16/2003**

I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to: Commissioner for Patents, Alexandria, VA 22313-1450.

By Myra Christeck  
Typed Name: Myra Christeck

Respectfully submitted,

Zhang-Lin Zhou, et al.

By David W. Collins

David W. Collins

Attorney/Agent for Applicant(s)  
Reg. No. **26,857**

Date: Oct. 16, 2003

<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	<b>ATTY. DOCKET NO.</b>	<b>APPLICATION NO.</b>	<b>CONFIRMATION NO.</b>
	<b>200300077-1</b>		
	<b>APPLICANT</b>		
	<b>Zhang-Lin Zhou, et al.</b>		
	<b>FILING DATE</b>	<b>GROUP</b>	
	<b>Filed Herein</b>		

**REFERENCE DESIGNATION**      **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	1A	4,110,015	8/29/1978	Reddy	Background Reference
	1B	4,139,275	2/13/1979	Yano et al.	Background Reference
	1C	4,304,465	12/8/1981	Diaz	Background Reference
	1D	5,258,279	11/2/1993	Simon et al.	Background Reference
	1E	5,332,654	7/26/1994	Simon et al.	Background Reference
	1F	5,399,709	3/21/1995	Simon et al.	Background Reference
	1G	6,556,470	4/29/2003	Vincent et al.	Background Reference
	1H				
	1I				
	1J				
	1K				

## **FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	1L					
	1M					
	1N					
	1O					
	1P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

1Q	Zhang, Xiao-An, et al., "Electric-Field Actuated Chromogenic Materials Based on Molecules with a Rotating Middle Segment For Applications in Photonic Switching", Patent Application Pending, Serial # 10/187,720, filed July 1, 2002.
1R	Zhang, Xiao-An, et al., "Bistable Molecular Mechanical Devices Activated by an Electric Field for Electronic Ink and Other Visual Display Applications", Patent Application Pending, Serial # 09/898,799, filed July 3, 2001.
1S	Zhang, Xiao-An, et al. "Bistable Molecular Mechanical Devices With a Middle Rotating Segment Activated by an Electric Field for Electronic Swtiching, Gating, and Memory Applications", Patent Application Pending, Serial # 09/846,135, filed April 30, 2001.

EXAMINER

**DATE CONSIDERED**

FORM PTO-1449		ATTY. DOCKET NO. <b>200300077-1</b>	APPLICATION NO.	CONFIRMATION NO.
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT <b>Zhang-Lin Zhou, et al.</b>		
(Use several sheets if necessary)		FILING DATE <b>Filed Herein</b>	GROUP	

## REFERENCE DESIGNATION                    U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
2A				
2B				
2C				
2D				
2E				
2F				
2G				
2H				
2I				
2J				
2K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	2L					
	2M					
	2N					
	2O					
	2P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

	2Q	Zhang, Xiao-An, et al., "Bistable Molecular Mechanical Device Activated by an Electric Field for Electronic Ink and Other Visual Display Applications", Patent Application Pending, Serial # 09/932,186, filed August 17, 2001.
	2R	Zhang, Xiao-An, et al., "Bistable Molecular Mechanical Devices with a Band Gap Change Activated by an Electric Field for Electronic Switching, Gating, and Memory Applications", Patent Application Pending, Serial # 09/823,195, filed March 29, 2001.
	2S	Zhang, Xiao-An, et al., "Molecular Mechanical Devices with a Band Gap Change Activated by an Electric Field for Optical Switching Applications", Patent Application Pending, Serial #09/844,862, filed April 27, 2001.

EXAMINER	DATE CONSIDERED
----------	-----------------

FORM PTO-1449		ATTY. DOCKET NO. <b>200300077-1</b>	APPLICATION NO.	CONFIRMATION NO.
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT <b>Zhang-Lin Zhou, et al.</b>		
(Use several sheets if necessary)		FILING DATE <b>Filed Herein</b>	GROUP	

## REFERENCE DESIGNATION                    U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
3A				
3B				
3C				
3D				
3E				
3F				
3G				
3H				
3I				
3J				
3K				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	3L					
	3M					
	3N					
	3O					
	3P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

3Q	Zhang, Xiao-An, et al., "Electric Field Actuated Chromogenic Materials Based on Molecules with a Rotating Middle Segment for Applications in Photonic Switching", Patent Application Pending, Serial #10/187,720, filed July 1, 2002.
3R	Vincent, Kent D., et al., "Hard Copy System Including Rewritable Media", Patent Application Pending, Serial #10/016,560, filed October 31, 2001.
3S	Vincent, Kent D., et al., "Portable Electronic Reading Apparatus", Patent Application Pending, Serial # 09/978,394, filed October 16, 2001.

EXAMINER	DATE CONSIDERED
----------	-----------------

<b>FORM PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	<b>ATTY. DOCKET NO.</b>	<b>APPLICATION NO.</b>	<b>CONFIRMATION NO.</b>
	<b>200300077-1</b>		
	<b>APPLICANT</b>		
	<b>Zhang-Lin Zhou, et al.</b>		
	<b>FILING DATE</b>	<b>GROUP</b>	
	<b>Filed Herein</b>		

## **REFERENCE DESIGNATION**

## **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
	4A				
	4B				
	4C				
	4D				
	4E				
	4F				
	4G				
	4H				
	4I				
	4J				
	4K				

## **FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
	4L					
	4M					
	4N					
	4O					
	4P					

**OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)**

	4Q	Vincent, Kent D., et al., "Scanning, Copying and Printing with Rewritable Media", Patent Application Pending, Serial #10/051,669, filed January 17, 2002.
	4R	Vincent, Kent D., et al., "High Resolution Display", Patent Application Pending, Serial #09/981,166, filed on October 16, 2001.
	4S	Vincent, Kent D., et al., "Laser Printing with Rewritable Media", Patent Application Pending, Serial #10/021,446, filed October 30, 2001.

**EXAMINER**

**DATE CONSIDERED**

FORM PTO-1449		ATTY. DOCKET NO. <b>200300077-1</b>	APPLICATION NO.	CONFIRMATION NO.
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		APPLICANT <b>Zhang-Lin Zhou, et al.</b>		
(Use several sheets if necessary)		FILING DATE <b>Filed Herein</b>	GROUP	

## REFERENCE DESIGNATION                    U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUBLICATION DATE	NAME	Pages, Columns, Lines Where Relevant Passages or Figures Appear
5A				
5B				
5C				
5D				
5E				
5F				
5G				
5H				
5I				
5J				
5K				

## FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT	Pages/Columns/Lines Where Relevant Passages/Figures Appear	Check if Translation attached
5L					
5M					
5N					
5O					
5P					

## OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)

5Q	Vincent, Kent D., et al., "Color Display with Molecular Light Valve", Patent Application Pending, Serial #10/171,060, filed June 13, 2002.
5R	
5S	

EXAMINER

DATE CONSIDERED